

Year 4 Science Assessment: The Life of Plants

Learning objective: To identify and describe the functions of different parts of flowering plants, explore the requirements of plants for life and growth, and investigate the way in which water is transported within plants.

Read each question carefully. Use your scientific knowledge to provide clear explanations. Remember to use accurate terminology.

Nova the owl has been observing a patch of wildflowers in the meadow. She notices that some plants are thriving in the sunlight, while others near the stream have different leaf structures. She wants to understand how these plants survive, grow, and reproduce in their environment.

Word bank: photosynthesis · stomata · xylem · transpiration · germination · pollination · sepal · nutrient

1. Identify the four main parts of a flowering plant and state one primary function for each. (4 marks)

2. Explain the process of water transport in a plant. How does water move from the roots to the leaves? (3 marks)

3. Nova observes that a plant kept in a dark cupboard for a week looks wilted and pale. Justify why the plant requires sunlight to remain healthy. (3 marks)

4. Compare and contrast the roles of the flower and the roots. Why are both essential for the survival of the plant species? (4 marks)

5. What might happen to a plant if the stem were damaged? Explain the impact on the rest of the plant's parts. (3 marks)

6. Describe the lifecycle of a flowering plant. Include the stages of pollination, seed formation, and germination in your response. (5 marks)

7. Why do some plants have broader leaves than others? Suggest a reason based on the environment they might live in. (3 marks)

Draw: Draw a diagram of a flowering plant. Clearly label the roots, stem, leaves, and flower. Use an arrow to show the direction that water travels through the plant.



Extension challenge: Total: /25. Imagine you are a botanist. Write a short paragraph explaining how a plant would adapt if it were moved from a rainy rainforest to a dry, hot desert. Consider what changes it would need to make to its water storage and leaf structure to survive.